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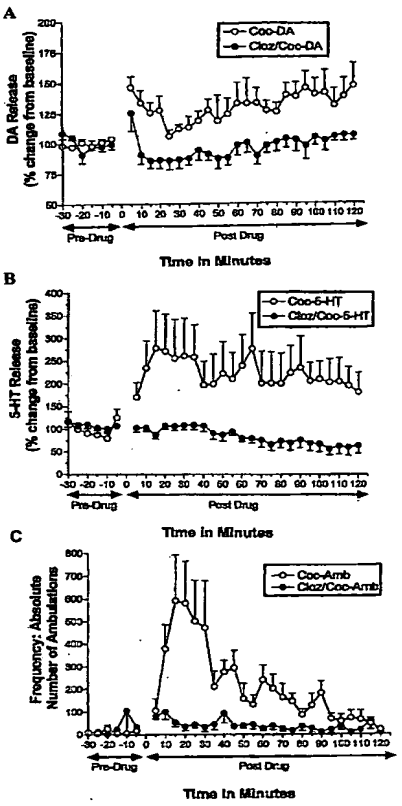
(54) Title: CLOZAPINE AND COCAINE EFFECTS ON DOPAMINE AND SEROTONIN RELEASE IN NUCLEUS ACCUMBENS DURING PSYCHOSTIMULANT BEHAVIOR AND WITHDRAWAL



(57) Abstract: The present invention provides methods of treating cocaine-induced pyschosis by administering an atypical antipsychotic compound in an amount sufficient to increase serotonin concentration in the nucleus accumbens of a mammal. According to the invention, atypical antipsychotic compounds include, without limitation, clozapine, risperidone, olanzepine, quetiapine, ziprasidone, sertindole, ketanserin, aripiprazole, and haloperidol, flupenthixol, thioridazine, loxapine, fluspirilense, and sulpliride. The invention further provides methods for microvoltammetric imaging of changes in neurotransmitter concentrations in vivo and in real time comprising contacting the cell, cells, tissue, tissues, or organ of interest with a BRODERICK PROBE® sensor, applying a potential to said BRODERICK PROBE® sensor, and monitoring a temporally and spacially resolved recording using neuromolecular imaging (NMI) and electrochemical circuits such as, for example, voltammetry. In one embodiment of the invention, neuromolecular imaging may be performed before, during or after cocaine administration and/or cocaine-induced psychosis.

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